



Understorey Network

Autumn Newsletter 2006
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In this Issue

Groundsels and Fireweed
Getting Kangaroo Grass to grow
Pushing up the Daisies
Understories: An experienced Grower
Events

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www.understorey-network.org.au

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Brian Griffiths, Liz Quinn, Bill Chugg,
Joan Rodrigues

Project Manager's Report

With the year well underway, and Autumn upon us, I have found that the summer newsletter escaped, due to lots of field days and grant reporting. Any assistance with compiling the newsletter or any articles/stories would be Much Appreciated, and help ensure that each edition is published on time.

Summer seed collecting with members around the state, including Bridport, Hawley and Margate has resulted in copious amounts of paperbags, in the seedbank awaiting sorting and cleaning. Added to these, are seeds sent in by members— giving us a really good range of species from an increasing number of sites. I'm sure there are still lots of overfull shoeboxes of seeds in people's cupboards— I will be seeking these out in winter, when we will have time to take stock and have some seed sorting sessions.

Our new Autumn Growers Scheme is about to get underway, this will be focused on growing seeds that germinate best over Autumn and Winter. This is a trial, to see if plants germinate and grow quickly enough to go in the ground before it dries out and temperatures rise. There is certainly plenty of interest from members in registering for this growing scheme.

I hope that those growing in the last Spring round have had success, and your plants have been gratefully received by the landowner.

I'd like to farewell our vice president Helen Morgan from the committee. Helen was one of the key people in refunding and revitalising the Understorey Network, and her contribution has been much appreciated. Welcome to Neve Alice, born to committee member Liz in March, Congratulations to Liz and family!

Groundsels and Fireweeds

By Phil Watson

With over 1500 species worldwide, the herbaceous Groundsels and Fireweeds make up a significant portion of the Daisy (*Asteraceae*) family. This genus has many interesting features and relationships, including two intriguing stories. The first explores how the hardy South African Sticky Groundsel (*Senecio viscosus*) imposed grief and extensive heartache up on the 'Imperial Bushmen Contingent' troops during the Boer War and the second describes the strange but painful exploding trousers problem arising from efforts to control the rampant Ragwort weed (*S. jacobaea*).

Groundsels exhibit attractive floral displays

Before exploring further the above two stories, let's highlight some of the fascinating attributes of the numerous Groundsels and Fireweeds species. Many species are horticultural gems appreciated for their contributions towards colourful garden displays. Well known are the reliable winter flowering, shade loving 'Florists Cineraria', *S. cruenta* and the old fashioned grey-leaved 'Dusty Miller', *S. cineraria*. Others include the garden gem, California Geranium *S. petasitis* with its distinctive lobed foliage enveloping delightful yellow panicles and the bold bright yellow flowering trusses of the Big-leaf Groundsel *S. grandiflorus*



Senecio leptocarpus

Alpine and woodland Groundsels abound

Tasmania is privileged to have 23 indigenous species including a suite of alpine Groundsels such as the single flowering yellow and cream forms of *S. pectinatus*, the floriferous *S. leptocarpus* and the showy *S. primulaefolius*.

Common woodland species include the Shrubby and Common Fireweeds, *S. minimus* and *S. linearifolius* and the differing forms of the Variable Groundsel *S. lautus*. These grow prolifically with their characteristic yellow daisy flowers, often dominating any bare soil. The more drought-tolerant natives, such as the silver, Cotton Fireweed, *S. quadridentatus*, Hill Fireweed, *S. hispidulus* and the Annual Fireweed *S. glomeratus* (with its distinctive covering of soft cobweb-like hairs), carry out a scab-like protective role particularly after bush fires and vegetation clearing. By temporarily protecting the soil from water erosion, they contribute significantly towards re-establishing the original woodland community and its delicately balanced interrelationships.

Butterfly-attracting flowers produce fluffy grey bearded seed heads

Most species develop a characteristic fluffy grey or white parachute-like seed heads (pappus). Since these resembled an old man's beard this feature resulted in the botanical name *Senecio*, derived from the Latin for old man 'Senex'. Their common name, Groundsel, came from 'Grundeswyle', Latin for 'Earth glutton'. It reflects upon the ability of its wind-blown seed to germinate freely, enabling them to act as pioneering colonisers.

Close examination of their yellow flower heads, reveals many tiny ray and disc shaped florets, packed tightly together to resemble a single flower. This flower form evolved to provide a wonderfully simple way for nectar seeking insects to easily pollinate many flowers during only one visit. Hence it is not uncommon to observe them enveloped in a cloud of insect pollinators such as beetles, hoverflies, moths, native bees, flies, flower spiders and lady birds.

The Chaostola and Donnysa Skippers along with

the White Grass Dart and Yellow Banded Dart butterflies take advantage of this feature, collecting nectar in exchange for their pollination services. Under protection of darkness their larva browses on native grasses or sedges and finally pupates by forming cylindrical cells, out of the leaves that they tie and roll together. These butterflies are very territorial towards their Groundsels, displaying aggression against other males or insects with buffeting and spiralling flight patterns.

Their orange, brown and black colourations send a clear message to potential predators that they contain a highly toxic alkaloid (*pyrrolizidine*). In fact they have absorbed substantial amounts whilst feeding on the groundsel's pollens and flower parts. This same alkaloid has been linked to irreversible liver damage and death of stock. Flour (grain crops), milk (grazing cows) or honey (foraging bees) contaminated by Groundsel are constant concerns to primary producers.

Sticky Groundsel and Ragwort caused disastrous impacts

Unfortunately, the *Senecio* genus contains a number of environmental weeds including the highly toxic Ragwort, *S. jacobaea* and the pretty Purple Groundsel, *S. elegans*.

Ragwort, being a prolific weed confronting pastoralists both in Australia and New Zealand was the focus of a major control program in the 1930's, using the unstable but effective Potassium Chlorate. However, the dust from this chemical trapped itself within the cotton fibres of horsemen's trousers. Once heated by riding friction it dramatically exploded causing severe burns and major lose of dignity to many devastated horsemen. It was soon replaced by another safer herbicide by the late 1930's.

Sticky Groundsel is the most toxic of all Groundsel weeds and this fact brings us back to our Boer War story. The trouper's horses making up the ranks of the Light-Horse Regiment were decimated by this toxic little South Africa native. This situation was described vividly in a quote by Adamson in the book "The Private Capital". "*Horse sickness, a disease particular to South Africa, is doing its work: a horse starts out perfectly well and is dead by noon*". No wonder its war record had an enormous impact on the moral of the Aussie Light Horsemen, whose horses had accompanied them all the way from home. Beyond this strong bonding, their survival was a tribute to their trusty steeds.

As an aside, its succulent leaves have enabled to flourish, as a weed on gravel bedding along railway lines in the USA. Its fine roots clamber over the stone surfaces, scavenging moisture that condenses in the cool of the night between the stones. With its ability to kill most grazing insects, its insecticidal qualities are attracting research dollars.

Parrot's favourite treat

On a happier note, the Common Groundsel (*S. vulgaris*), often revives memories of those by-gone days when one's pet parrot, canary or finch was given a fresh sprig as a treat. Many of our feathered friends also enjoy cheery ground-sels and fireweeds without ill effects, pecking the developing seed heads from our native Groundsels. These birds include the introduced European Goldfinch, the Greenfinch, the Beautiful Firetail (Tassie's only native finch) along with our colourful Blue-winged parrot, Eastern and Green Rosellas and Musk Lorikeets. As gardeners feeding the birds is one of the many great reasons for growing a selection of hardy but cheery ground-sels and fireweeds!



Senecio squarrosus

Getting Kangaroo Grass to grow

The following is based on two recently published articles, referenced below.

Restored woodland areas that are comprised mostly of trees have limited habitat values, without the without the floristic diversity of the understorey.

However, putting back the understorey often takes more planning, time and knowledge than planting trees, especially when the soil seedbank of native plants has been depleted.

Putting back native grasses first is often a critical step to restoring the understorey in open woodlands and grassland. Tussock grasses and kangaroo grasses in particular have the ability, in the right conditions to compete against exotic weeds, and to provide conditions conducive to the establishment of other understorey species.

Themeda can be introduced to small-sized sites using seedlings, or potted plants, or by transplanting intact sods from existing remnants. For larger sites, it is best to use direct seeding. However seeds that have been 'cleaned' by removing the awn for mechanised direct seeding, have been found to be slower at establishment and less vigorous in growth.

If you have ever picked themeda seeds out of your socks, you may have noticed that it affixes firmly via the backwardly pointing bristles on the seedhead. The seed has a long kinked awn that aids the seed by rotating at the bend when moistened, and buries the seedhead firmly into cracks in the soil (or your socks). The easiest way to direct seed is to spread seed-bearing hay directly onto the site. The hay can be harvested using a sickle or a brush cutter.

Germination of seeds can be enhanced by leaving seeds for a period to 'ripen', by storing in a dry shed for about 9 months. Seeds germinate best when soil surface temperatures are greater than 25°C and when soil moisture is around field capacity.

Burning the seed-bearing hay after scattering can promote germination, reduce shading, and knock back weed competition. Using seed-bearing hay has some limitations, as it is variable in quality with seed



densities ranging from 240 to 3000 seeds/kg.

It is also bulky and difficult to handle.

Themeda can grow in soils with added fertiliser, although it doesn't enhance growth or survival. However fertilised soil does enhance the growth rate of exotic weeds, and these can impact on the growth of themeda seedlings. Recent trials with organic control methods of weeds in themeda revegetation sites have found that sugar is an effective control agent of annual weeds.

It is a good short-term non-chemical and ecologically friendly method of control.

Sugar works because it is one of the fastest ways of reducing soil nitrate levels. Nitrate levels have been found to be high in degraded remnants and very low in undisturbed remnants – tying nitrogen up with sugar applications gives themeda a fighting chance to establish over the weeds.

The rate to use sugar:

0.5kg per square meter of soil, every three months until Themeda is established. This is not necessarily the optimum rate, as further research is needed, you may like to try different rates or cheaper forms of sugar such as molasses.

Sugar reduces soil nutrients by feeding micro-organisms which in turn absorb soil nutrients as they grow, so the weeds are denied access to them. The weeds are starved while the native grass flourishes in low nutrient soil. Once the themeda is established, it suppresses nutrient levels and allows the establishment of other native plants, such as wildflowers.

References

Cole I. and Lunt I. (2005) Restoring Kangaroo Grass (*Themeda triandra*) to grassland and woodland understoreys: a review of establishment requirements and restoration exercises in south-west Australia. *Ecological Management and Restoration* **6** (1) 28-33

Beemster, M. (2006). 'A Sweet End to Weeds'. *Australian Landcare* March 2006 11-12

Pushing Up the Daisies



Old cemeteries contain interesting inhabitants from an ecological as well as historical perspective! The cemeteries of the Uniting Church in Campbell Town and Bothwell were the focus of a couple of field days held in January titled 'Pushing up the Daisies'

The field days were organised as a partnership between Greening Australia and the Understorey Network and featured the exceptional examples of native grassland vegetation in these cemeteries.

*The dominant vegetation in these cemeteries is kangaroo grass (*Themeda triandra*) followed by speargrass (*Austrostipa* sp) and wallaby grass (*Austrodanthonia* sp.) In between the grass tussocks, are a range of daisies, lilies, herbs and orchids - the diversity and colour is truly amazing to see when viewed closely.*

*Several threatened species have found a haven in the cemeteries, including Gunn's Mignonette (*Stackhousia gunii*), the Woolly New Holland Daisy (*Vittadinia gracilis*) and Curtis' Colobanth (*Colobanthus curtisiae*).*

Each of the cemeteries featured a different mix of species, with a general impression of masses of yellow flowering daisies amongst the finer native grasses.

Next time you are travelling through Campbell Toan or Bothwell in spring/early summer—take a moment to stop and contemplate the colourful inhabitants of the wonderful grasslands in the Uniting Church cemeteries.

Understories

a very experienced grower



Desiree Meyer, pictured here with son Ryan is one of our most experienced and productive growers. Des began growing plants for her small acreage block in Kettering about 4 years ago. She has been growing approximately 1,000 plants in every growing season since then, and supplied many of her neighbours with local provenance plants for their 5 acre blocks.

As a consequence Kettering has become a stronghold of Understorey Network members! Des has her plant boxes set up above the ground at waist height, and covered with bird netting to discourage the possums from pruning the seedlings. She finds the long deep white boxes are best (ex broccoli or salmon boxes) as they fit 50 tubes in neatly, and the high sides seem to provide extra warmth.

Some of the most difficult plants Des has grown are the slow germinators, such as Billiardiera, which took 9 months to appear, Banksia (1 year!) and Bursaria (6 months). Her advice is don't give up on no-shows, hang onto those lifeless tubes and you may be surprised!

Walking around Des's land with her is a pleasure, as she knows the personal history of every plant, from the source of the seed, to planting. With her helping hand, the bush is slowly returning to her patch.

Owls worth looking after on farms:

*Summary of an interview with Anna Povey reported in the March edition of **Tasmanian Country**:*

Anna Povey of the Understorey Network said that if farmers look after owls' habitat – by keeping hollow trees for nesting, as well as areas of dense small trees for roosting, on their property – owls can return the favour by providing valuable and often unnoticed environmental services. Predators and parasites supported by remnant forests benefit farmers by eating insect as well as furry pests.

The masked owl – the largest member of the barn owl group – could eat animals as large as rabbits, providing a free pest control service. Bats, also seldom noticed, could eat roughly half their body weight of insects in a night – as many as 4000 mosquitoes.

Owls and bats are dependent on hollow trees. Masked owls require a hollow at least 20 cm in diameter, which they typically find in trees older than 200 years. Dead hollow trees are as suitable as live trees but clearing has resulted in Tasmanian masked owls, once Australia's most dense masked owl population, having recently been added to the endangered species list.

The World Heritage Area is generally not good owl habitat as they prefer drier environments such as in the eastern half of Tasmania, and they especially favour the margins of paddocks and forests. This is an important predator and endangered species, that lives right amongst us.

Artificial hollows could be effective if they were of the right design.

Farmers who detected the owl's screeching call on their properties should "feel very proud".

Understorey Network Autumn events

Please note that the RSVP contact for these events .I will be on leave during April/May returning on the 15th of May.

Propagation Sessions

The Understorey Network in partnership with the Royal Tasmanian Botanical Gardens (RTBG) is running a workshop on growing native plants from cuttings and seed.

Note: It is important to register your interest in attending at least one week in advance so resources can be organised. Each session is limited to 10 people only. Cost is \$10 per person, with all equipment and plants provided.

North:

Date and Time: 10am to 12:30

Wednesday, 10th of May

*Venue: The Tasmanian Arboretum at Eugenea.
(map on reverse side)*

Register by ringing the RTBG: Jean Grey (6236 3068) or Megan Brown (6236 3069)

Penguin Planting Working Bee on the Derwent River

The Derwent Estuary Penguin Project is holding a planting working bee for Understorey Network members. Participants will be planting penguin-friendly plants, grown by members around a penguin rookery.

Date and Time: Sunday, June 4th at 1:30pm

Place: Blackmans Bay (register below for further details)

Bring: Gloves, drink

Please contact Veronica Thorp, at least one week in advance. Phone 6244 4154 or 0412 146 460 or email vthorp@optusnet.com.au.

All newsletters are now available on our website:

www.understorey-network.org.au



Sorting seeds at the Broad River



Collecting seeds at the Broad River



Collecting Themeda chaff en masse!

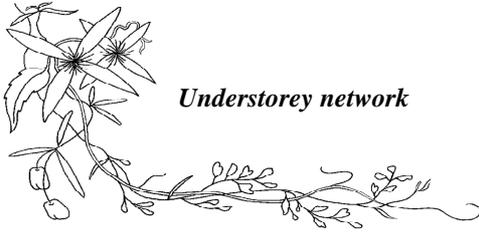


Home Expo Display in the Town Hall

 * Early Notification:
 * The President, Anne Griffiths and Understorey Network Committee would like to invite you to a
 * strategic planning forum in July to define and plan the future of the Understorey Network. This
 * is an important event to help ensure the future success of the network as one of the key com-
 * munity grass-roots hands-on organisations in Tasmania.
 * We need all members to contribute their ideas for this—what can we do better? Are there
 * other services we could provide? How do we widen our funding base?
 * Please start considering these points now, in preparation for your contribution.



Line Drawings by Janet Fenton



Understorey network

Membership Application

ABN 62 599 420 020

Annual membership: \$22 includes GST

Please post cheque or money order to:

Anne Griffiths

Understorey Network

PO BOX 126 Huonville TAS 7109

Name:

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P/Code:

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